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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2004-NE-05-AD; Amendment 39-14706; AD 2006-16-06]**

**RIN 2120-AA64**

### **Airworthiness Directives; General Electric Company (GE) CF6-80 Series Turbofan Engines**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is superseding an existing airworthiness directive (AD) for GE CF6-80 series turbofan engines with certain stage 1 high-pressure turbine (HPT) rotor disks. That AD currently requires an initial inspection as a qualification for the mandatory rework procedures for certain disks, and repetitive inspections only for certain disks for which the rework procedures were not required. That action also requires reworking certain disks before further flight, and removes certain CF6-80E1 series disks from service. This AD requires the same actions but shortens the compliance schedule for HPT disks that have not been previously inspected using AD 2004-04-07, which this AD supersedes. This AD results from a recent report of an uncontained failure of a stage 1 HPT disk. We are issuing this AD to detect and prevent cracks in the bottoms of the dovetail slots that could propagate to failure of the disk and cause an uncontained engine failure.

**DATES:** Effective September 5, 2006. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of September 5, 2006. The Director of the Federal Register previously approved the incorporation by reference of certain other publications listed in the regulations as of March 12, 2004 (69 FR 8801, February 26, 2004).

We must receive any comments on this AD by October 17, 2006.

**ADDRESSES:** Use one of the following addresses to submit comments on this ad:

By mail: Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2004-NE-05-AD, 12 New England Executive Park, Burlington, MA 01803.

By fax: (781) 238-7055.

By e-mail: 9-ane-adcomment@faa.gov.

Contact General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, fax (513) 672-8422, for the service information identified in this AD.

You may examine the AD docket, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the service information, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

**FOR FURTHER INFORMATION CONTACT:** James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone: (781) 238-7176, fax: (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** On February 13, 2004, we issued AD 2004-04-07, Amendment 39-13488 (69 FR 38; February 26, 2004). That AD requires an initial inspection as a qualification for the mandatory rework procedures for certain disks, and repetitive inspections only for certain disks for which the rework procedures were not required. That action also requires reworking certain disks before further flight. That AD was the result of the manufacturer's investigation and development of a rework procedure to chamfer the aft breakedge of the dovetail slot bottom to reduce stresses. That condition, if not corrected, could result in cracks in the bottoms of the dovetail slots that could propagate to failure of the disk and cause an uncontained engine failure.

### **Actions Since AD 2004-04-07 Was Issued**

Since AD 2004-04-07 was issued, a CF6-80A turbofan engine, installed on a Boeing 767 airplane, experienced an uncontained stage 1 HPT disk failure on June 2, 2006. The disk failure resulted in a fire and significant damage to the airplane. The event occurred during an on-ground maintenance operation.

### **Relevant Service Information**

We reviewed and approved the technical contents of the following GE Service Bulletins (SBs) and Alert Service Bulletin (ASB) that describe procedures for removing, inspecting, and reworking certain stage 1 HPT rotor disks:

- SB No. CF6-80E1 S/B 72-0251, dated January 22, 2004;
- SB No. CF6-80A S/B 72-0779, Revision 1, dated January 22, 2004;
- SB No. CF6-80A S/B 72-0788, Revision 3, dated July 20, 2006;
- SB No. CF6-80A S/B 72-0822, dated July 20, 2006;
- ASB No. CF6-80C2 S/B 72-A1026, Revision 2, dated January 22, 2004;
- SB No. CF6-80C2 S/B 72-1089, Revision 3, dated July 20, 2006;
- SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006.

### **FAA's Determination and Requirements of This AD**

The unsafe condition described previously is likely to exist or develop on other GE CF6-80 series turbofan engines of the same type design. This AD requires rework of the dovetail slot bottom of certain stage 1 rotor disks. The disks must pass an inspection to qualify for the rework. This AD also requires removal from service of certain disks for which the rework procedures were not previously required. This AD also tightens the compliance schedule for HPT disks that have not been previously inspected using AD 2004-04-07. Operators must use the compliance schedule carried forward from AD 2004-04-07 or the new compliance schedule below, whichever occurs first:

For stage 1 HPT rotor disks with 9,000 or more cycles-since-new (CSN) on the effective date of this AD, within 250 cycles-in-service (CIS) after the effective date of this AD, or by March 31, 2007, whichever occurs first.

For stage 1 HPT rotor disks with 6,900 or more but fewer than 9,000 CSN on the effective date of this AD, within 500 CIS after the effective date of this AD, or before accumulating 9,250 CSN, or by December 31, 2007, whichever occurs first.

For stage 1 HPT rotor disk with fewer than 6,900 CSN on the effective date of this AD, before accumulating 7,400 CSN, or by December 31, 2008, whichever occurs first.

This AD also removes from service certain CF6-80E1 series disks. You must use the service information described previously to perform the actions required by this AD.

### **FAA's Determination of the Effective Date**

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. 2004-NE-05-D" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us verbally, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

### **Examining the AD Docket**

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See ADDRESSES for the location.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2004-NE-05-AD" in your request.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Amendment 39-13488 (69 FR 8801; February 26, 2004), and by adding a new airworthiness directive, Amendment 39-14706, to read as follows:

# AIRWORTHINESS DIRECTIVE

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**



**2006-16-06 General Electric Company:** Amendment 39-14706. Docket No. 2004-NE-05-AD.

## Effective Date

(a) This airworthiness directive (AD) becomes effective September 5, 2006.

## Affected ADs

(b) This AD supersedes AD 2004-04-07 (69 FR 8801; February 26, 2004).

## Applicability

(c) This AD applies to the General Electric Company (GE) CF6-80 turbofan engine models listed in the following Table 1:

**Table 1.—Applicability Models, Part Numbers, Airplanes**

<b>Models</b>	<b>Stage 1 High Pressure Turbine (HPT) Rotor Disk Part Numbers (P/Ns)</b>	<b>Engines Installed on But Not Limited To</b>
CF6-80A, CF6-80A1, CF6-80A2, CF6-80A3.	9234M67G22/G24/G25/G26, 9362M58G02/G06/G07/G09, 9367M45G02/G04/G09.	Airbus A310 and Boeing 767 airplanes.
CF6-80C2A1, CF6-80C2A2, CF6-80C2A3, CF6-80C2A5, CF6-80C2A8, CF6-80C2A5F, CF6-80C2B1, CF6-80C2B2, CF6-80C2B4, CF6-80C2B6, CF6-80C2B1F, CF6-80C2B2F, CF6-80C2B4F, CF6-80C2B5F, CF6-80C2B6F, CF6-80C2B6FA, CF6-80C2B7F, CF6-80C2D1F.	1862M23G01, 9392M23G10/G12/G21, 1531M84G02/G06/G08/G10/G12.	Airbus A300, A310, Boeing 747, 767, and McDonnell Douglas MD11 airplanes.
CF6-80E1A2, CF6-80E1A4.	1639M41P04.	Airbus A330 airplanes.

These engines are installed on, but not limited to, the airplanes listed in Table 1 of this AD.

## Unsafe Condition

(d) This AD results from a recent report of an uncontained failure of a stage 1 HPT disk. The actions specified in this AD are intended to detect and prevent cracks in the bottoms of the dovetail slots that could propagate to failure of the disk and cause an uncontained engine failure.

## Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

*CF6-80A, -80A1, -80A2, and -80A3 Engines*

### **Stage 1 HPT Rotor Disks, P/N 9362M58G09, With Chamfered Breakedges**

(f) At the next piece-part exposure, for stage 1 HPT rotor disks, P/N 9362M58G09, with serial numbers (SNs) listed in Table 2 of this AD, do the following, unless already done using superseded AD 2004-04-07:

**Table 2.—SNs of CF6-80A Series Stage 1 HPT Rotor Disk P/N 9362M58G09—With Chamfered Breakedges**

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GWN03RD7
GWN03TKG
GWN03TKH
GWN03TKJ
GWN03W3M
GWN03W3N
GWN03W3R
GWN042J3
GWN04FW2
GWN04FW3
GWN04FW4
GWN04FW5
GWN04H0M
GWN04HRA
GWN04HRD
GWN04HRE
GWN04HRF
GWN04HRG
GWN04HRH
GWN04K8N
GWN04M9J
GWN04M9K
GWN04M9L
GWN04M9M
GWN04M9R
GWN04M9T
GWN04M9W

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(1) Visually inspect the rotor disks for the presence of a chamfer on the aft breakedges of the dovetail slot bottoms. Use paragraph 3.A. of GE Service Bulletin (SB) No. CF6-80A S/B 72-0822, dated July 20, 2006, to do the inspection.

(2) For disks that have the chamfered breakedges, re-mark, fluorescent penetrant inspect (FPI), and eddy current inspect (ECI) the rotor disk. Use paragraph 3.A.(1) of the Accomplishment Instructions of GE SB No. CF6-80A S/B 72-0822, dated July 20, 2006, to re-mark and inspect the rotor disk and remove from service as necessary.

(3) For disks that do not have the chamfered breakedges, remove the disk from service. Use paragraph 3.A(2) of the Accomplishment Instructions of GE SB No. CF6-80A S/B 72-0822, dated July 20, 2006.

**Stage 1 HPT Rotor Disks, P/Ns 9234M67G22, G24, G25, G26, 9367M45G04, G09, 9362M58G02, G06, G07, and 9362M58G09 with SNs not listed in Table 2 of this AD**

(g) For stage 1 HPT rotor disks, P/Ns 9234M67G22, G24, G25, G26, 9367M45G04, G09, 9362M58G02, G06, G07, and 9362M58G09 with SNs not listed in Table 2 of this AD, inspect, rework, and re-mark the disks using paragraphs 3.A.(1) through 3.A.(2) of Accomplishment Instructions of GE SB No. CF6-80A S/B 72-0788, Revision 3, dated July 20, 2006, at the following, unless already done using superseded AD 2004-04-07:

(1) For both new and used stage 1 HPT rotor disks not installed in engines, inspect, rework, re-mark, and remove from service as necessary before further flight.

(2) For stage 1 HPT rotor disks that have been inspected using any version of GE SB No. CF6-80A S/B 72-0779, inspect, rework, re-mark, and remove from service as necessary at the next Engine Shop Visit (ESV) using the compliance times in the following Table 3:

**Table 3.—Compliance Times for Inspection and Rework of CF6-80A Series Stage 1 HPT Rotor Disks, P/Ns 9234M67G22, G24, G25, G26, 9367M45G04, G09, 9362M58G02, G06, G07, and 9362M58G09 With SNs Not Listed in Table 2 of This AD—Previously Inspected**

<b>Stage 1 HPT Rotor Disk Cycles-Since-Last-Inspection (CSLI) on March 12, 2004 (effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time For Inspection and Rework</b>
(i) More than 1,500 CSLI.	At the next ESV after March 12, 2004 (effective date of superseded AD 2004-04-07), but not to exceed 4,500 CSLI.
(ii) 1,500 CSLI or fewer.	At the next ESV after March 12, 2004 (effective date of superseded AD 2004-04-07), but not to exceed 3,500 CSLI.

(3) For stage 1 HPT rotor disks which have not been inspected using any version of GE SB No. CF6-80A S/B 72-0779, inspect, rework, re-mark, and remove from service as necessary using the following Table 4 or Table 4A compliance times, whichever occurs first:

**Table 4.—Compliance Times for Inspection and Rework of CF6-80A Series Stage 1 HPT Rotor Disks, P/Ns 9234M67G22, G24, G25, G26, 9367M45G04, G09, 9362M58G02, G06, G07, and 9362M58G09 With SNs Not Listed in Table 2 of This AD—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk Cycles-Since-New (CSN) on the Effective Date of This AD</b>	<b>Compliance Time For Inspection and Rework</b>
(i) 9,000 or more CSN.	Within 250 cycles-in-service (CIS) after the effective date of this AD, or by March 31, 2007, whichever occurs first.
(ii) 6,900 or more but fewer than 9,000 CSN.	Within 500 CIS after the effective date of this AD, but before accumulating 9,250 CSN, or by December 31, 2007, whichever occurs first.
(iii) Fewer than 6,900 CSN.	Before accumulating 7,400 CSN, or by December 31, 2008, whichever occurs first.

**Table 4A.—Compliance Times for Inspection and Rework of CF6-80A Series Stage 1 HPT Rotor Disks, P/Ns 9234M67G22, G24, G25, G26, 9367M45G04, G09, 9362M58G02, G06, G07, and 9362M58G09 With SNs Not Listed in Table 2 of This AD—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk CSN on March 12, 2004 (effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time For Inspection and Rework</b>
(i) 10,000 or more CSN.	At the next ESV or within 1,000 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first.
(ii) 5,000 or more CSN but fewer than 10,000 CSN.	At the next ESV or within 2,400 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 11,000 CSN.
(iii) Fewer than 5,000 CSN.	At the next ESV or within 3,500 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 7,400 CSN.

#### **Stage 1 HPT Rotor Disks, P/N 9367M45G02**

(h) For stage 1 HPT rotor disks, P/N 9367M45G02, remove the disk from service at the following times:

(1) For stage 1 HPT rotor disks not installed in engines, remove from service before further flight.



(2) For stage 1 HPT rotor disks that have been inspected before the effective date of this AD using any version of GE SB No. CF6-80A S/B 72-0779, and had more than zero CSN at the time of that inspection, remove from service at next ESV.

(3) For stage 1 HPT rotor disks that have not been inspected, or were only inspected with zero CSN before the effective date of this AD using any version of GE SB No. CF6-80A S/B 72-0779, remove from service using the following Table 5 or Table 5A compliance times, whichever occurs first:

**Table 5.—Compliance Times for Removal of CF6-80A Series Stage 1 HPT Rotor Disks, P/N 9367M45G02—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk CSN on the Effective Date of This AD</b>	<b>Compliance Time For Removal</b>
(i) 9,000 or more CSN.	Within 250 CIS after the effective date of this AD, or by March 31, 2007, whichever occurs first.
(ii) 6,900 or more but fewer than 9,000 CSN.	Within 500 CIS after the effective date of this AD, but before accumulating 9,250 CSN, or by December 31, 2007, whichever occurs first.
(iii) Fewer than 6,900 CSN.	Before accumulating 7,400 CSN, or by December 31, 2008, whichever occurs first.

**Table 5A.—Compliance Times for Removal of CF6-80A Series Stage 1 HPT Rotor Disks, P/N 9367M45G02—Not Previously Inspected**

<b>Stage 1 HPT rotor disk CSN on March 12, 2004 (effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time for Removal</b>
(i) 10,000 or more CSN.	At the next ESV or within 1,000 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first.
(ii) 5,000 or more CSN but fewer than 10,000 CSN.	At the next ESV or within 2,400 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 11,000 CSN.
(iii) Fewer than 5,000 CSN.	At the next ESV or within 3,500 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 7,400 CSN.

#### *CF6-80C2 Series Engines*

#### **Stage 1 HPT Rotor Disks, P/N 1531M84G10, With Chamfered Breakedges, Group 1**

(i) At the next piece-part exposure, for stage 1 HPT rotor disks, P/N 1531M84G10, with SNs listed in Table 6 (Group 1) of this AD, do the following, unless already done using superseded AD 2004-04-07:

**Table 6.—SNs of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1531M84G10, With Chamfered Breakedges, Group 1**

GWN03111	GWN035M5	GWN03759	GWN03C12
GWN03114	GWN035M6	GWN0375A	GWN03C13
GWN031N2	GWN035M7	GWN0375C	GWN03C14
GWN031N3	GWN035M8	GWN0375D	GWN03CA0
GWN031N4	GWN035M9	GWN0375E	GWN03DC9
GWN031N5	GWN035MA	GWN037H2	GWN03DCA
GWN031N6	GWN035MC	GWN03981	GWN03DCC
GWN031N7	GWN035MD	GWN03982	GWN03DCD
GWN031N8	GWN035TH	GWN03983	GWN03DCE
GWN031N9	GWN035TJ	GWN03984	GWN03DCF
GWN031NA	GWN035TK	GWN03985	GWN03DCG
GWN031NC	GWN035TL	GWN03986	GWN03DCH
GWN032G1	GWN035TM	GWN03987	GWN03DCJ
GWN032G2	GWN03699	GWN03988	GWN03DCK
GWN032G3	GWN0369A	GWN03989	GWN03DCL
GWN032G4	GWN0369C	GWN0398A	GWN03DCM
GWN032G5	GWN0369D	GWN0398C	GWN03DCN
GWN032G6	GWN0369E	GWN039PF	GWN03DCP
GWN032G7	GWN0369G	GWN039PG	GWN03DCR
GWN032G8	GWN0369H	GWN039PH	GWN03DME
GWN032G9	GWN0369J	GWN039PJ	GWN03DMF
GWN032GE	GWN036JG	GWN039PK	GWN03ER7
GWN0335P	GWN036JH	GWN039PL	GWN03ER8
GWN0335R	GWN036JJ	GWN039PM	GWN03ER9
GWN033C5	GWN036JK	GWN039PN	GWN03ERA
GWN034KR	GWN036JL	GWN03A4J	GWN03FTN
GWN034KT	GWN036JM	GWN03A4K	GWN03FTP
GWN03501	GWN036JN	GWN03A4L	GWN03FTR
GWN0350M	GWN03752	GWN03A4M	GWN03FTT
GWN0350N	GWN03753	GWN03A4N	GWN03FTW
GWN0350P	GWN03754	GWN03A4P	GWN03FW0
GWN0350R	GWN03755	GWN03A4R	GWN03H56
GWN0350T	GWN03756	GWN03A4T	GWN03H57
GWN0350W	GWN03757	GWN03A4W	GWN03H58

**Table 6.—SNs of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1531M84G10, With Chamfered Breakedges, Group 1 Continued**

GWN03HTL	GWN03L2D	GWN0402A	GWN049GJ
GWN03HTM	GWN03L2E	GWN0402F	GWN049M8
GWN03HTN	GWN03L2F	GWN0402L	GWN049M9
GWN03HTP	GWN03LNF	GWN040R5	GWN04AER
GWN03HTR	GWN03LNJ	GWN04189	GWN04ALR
GWN03HTT	GWN03LNK	GWN0418A	GWN04AM1
GWN03J8T	GWN03M88	GWN0418D	GWN04CGJ
GWN03J8W	GWN03M8C	GWN0418E	GWN04CGN
GWN03J91	GWN03M8E	GWN0418F	GWN04CGT
GWN03J92	GWN03M8J	GWN0418H	GWN04CGW
GWN03JNN	GWN03M8K	GWN0418J	GWN04CH3
GWN03JNP	GWN03NHN	GWN0418L	GWN04CH5
GWN03K3C	GWN03NHP	GWN0418N	GWN04CH8
GWN03K3D	GWN03NHR	GWN0418R	GWN04CH9
GWN03K3F	GWN03R74	GWN04366	GWN04D52
GWN03K3G	GWN03R76	GWN044DP	GWN04D54
GWN03K3H	GWN03R78	GWN0454H	GWN04D56
GWN03K3K	GWN03R7E	GWN0454M	GWN04D57
GWN03K3L	GWN03R7F	GWN0454N	GWN04D58
GWN03K3M	GWN03R9G	GWN045T0	GWN04D59
GWN03K3N	GWN03R9H	GWN045T2	GWN04DPW
GWN03K3T	GWN03R9M	GWN045T8	GWN04E9K
GWN03K3W	GWN03R9P	GWN045TD	GWN04E9L
GWN03K40	GWN03R9T	GWN045TG	GWN04E9M
GWN03K7R	GWN03RA2	GWN04722	GWN04EMA
GWN03KR1	GWN03RA3	GWN04729	GWN04EMK
GWN03KR3	GWN03RA5	GWN047LK	GWN04EML
GWN03KR4	GWN03RA8	GWN048CD	GWN04EMM
GWN03KR6	GWN03RPA	GWN048CF	GWN04FTL
GWN03KR7	GWN03RPC	GWN048CH	GWN04FTM
GWN03KR8	GWN03RPD	GWN048CJ	GWN04FTN
GWN03KRC	GWN04026	GWN048CK	

(1) Visually inspect the rotor disks for the presence of a chamfer on the aft breakedges of the dovetail slot bottoms. Use paragraph 3.A. of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006, to do the inspection.

(2) For disks that have the chamfered breakedges, re-mark, FPI, and ECI the rotor disk. Use paragraph 3.A.(1) of the Accomplishment Instructions of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006, to re-mark and inspect the rotor disk, and remove from service as necessary.

(3) For disks that do not have the chamfered breakedges, remove the disk from service. Use paragraph 3.A.(4) of the Accomplishment Instructions of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006.

#### *CF6-80C2 Series Engines*

### **Stage 1 HPT Rotor Disks, P/N 1531M84G10, With Chamfered Breakedges, Group 2**

(j) For stage 1 HPT rotor disks, P/N 1531M84G10, with SNs listed in Table 6A of this AD, with chamfered breakedges, (Group 2):

(1) With more than 6,900 CSN, perform paragraphs (j)(3) through (j)(5) as applicable, at the next ESV, but within 500 CIS after the effective date of this AD, unless already done using superseded AD 2004-04-07.

(2) With 6,900 CSN or fewer, perform paragraphs (j)(3) through (j)(5) as applicable, at the next ESV, but before accumulating 7,400 CSN, unless already done using superseded AD 2004-04-07.

**Table 6A.—SNs of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1531M84G10, With Chamfered Breakedges, Group 2**

GWN03J90	GWN03R7D	GWN03RPG	GWN0418W
GWN03K3R	GWN03R7G	GWN04027	GWN04190
GWN03K6J	GWN03R7H	GWN04028	GWN04191
GWN03K7T	GWN03R9J	GWN04029	GWN0454E
GWN03KR2	GWN03R9K	GWN0402E	GWN0454F
GWN03KR5	GWN03R9L	GWN0402G	GWN0454G
GWN03KRA	GWN03R9N	GWN0402H	GWN0454J
GWN03KRD	GWN03R9R	GWN0402J	GWN0454K
GWN03M89	GWN03R9W	GWN0402K	GWN0454L
GWN03M8D	GWN03RA0	GWN0402M	GWN045T1
GWN03M8F	GWN03RA1	GWN0402N	GWN045T3
GWN03NHT	GWN03RA4	GWN0402P	GWN045T4
GWN03R73	GWN03RA6	GWN0418C	GWN045T5
GWN03R75	GWN03RA7	GWN0418G	GWN045T6
GWN03R77	GWN03RP7	GWN0418K	GWN045T7
GWN03R79	GWN03RP9	GWN0418M	GWN045T9
GWN03R7A	GWN03RPE	GWN0418P	GWN045TA
GWN03R7C	GWN03RPF	GWN0418T	GWN045TC

**Table 6A.—SNs of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1531M84G10, With Chamfered Breakedges, Group 2 - Continued**

GWN045TE	GWN048CG	GWN04AET	GWN04DR4
GWN045TF	GWN048CM	GWN04ALT	GWN04DR9
GWN045TH	GWN048CN	GWN04ALW	GWN04DRE
GWN046F6	GWN048CP	GWN04AM0	GWN04DRJ
GWN046F7	GWN048CR	GWN04AM2	GWN04E9N
GWN046F8	GWN049GH	GWN04AM3	GWN04EM5
GWN04726	GWN049GK	GWN04AM4	GWN04F8N
GWN047LG	GWN049JL	GWN04CGL	GWN04F8P
GWN047LH	GWN049JM	GWN04CHA	GWN04FTJ
GWN047LJ	GWN049M7	GWN04CHC	
GWN047LL	GWN04AEP	GWN04D55	

(3) Visually inspect the rotor disks for the presence of a chamfer on the aft breakedges of the dovetail slot bottoms. Use paragraph 3.A. of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006, to do the inspection.

(4) For disks that have the chamfered breakedges, re-mark, FPI, and ECI the rotor disk. Use paragraph 3.A.(2) of the Accomplishment Instructions of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006, to re-mark and inspect the rotor disk, and remove from service as necessary.

(5) For disks that do not have the chamfered breakedges, remove the disk from service. Use paragraph 3.A.(4) of the Accomplishment Instructions of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006.

#### *CF6-80C2 Series Engines*

#### **Stage 1 HPT Rotor Disks, P/N 1531M84G12, With Chamfered Breakedges**

(k) For stage 1 HPT rotor disks, P/N 1531M84G12, with SNs listed in Table 6B of this AD, with chamfered breakedges:

(1) With more than 6,900 CSN, perform paragraph (k)(3) at the next ESV, but not to exceed 500 cycles after the effective date of this AD.

(2) With 6,900 CSN or fewer, perform paragraph (k)(3) at the next ESV, but before accumulating 7,400 CSN.

**Table 6B.—SNs of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1531M84G12, With Chamfered Breakedges**

GWN04CH6
GWN04G5H
GWN04M03

(3) FPI and ECI the rotor disk. Use paragraph 3.A.(3) of the Accomplishment Instructions of GE SB No. CF6-80C2 S/B 72-1217, dated July 20, 2006, to re-mark and inspect the rotor disk, and remove from service as necessary.

**Stage 1 HPT Rotor Disks, P/Ns 9392M23G10, G12, G21, 1531M84G02, G06, G08, and 1531M84G10 with SNs not listed in Table 6 and Table 6A of this AD**

(l) For stage 1 HPT rotor disks, P/Ns 9392M23G10, G12, G21, 1531M84G02, G06, G08, and 1531M84G10 with SNs not listed in Table 6 and Table 6A of this AD, inspect, rework, and re-mark the disks using paragraphs 3.A.(1) through 3.A.(2) of Accomplishment Instructions of GE SB No. CF6-80C2 S/B 72-1089, Revision 3, dated July 20, 2006, at the following, unless already done using superseded AD 2004-04-07:

(1) For both new and used stage 1 HPT rotor disks not installed in engines, inspect, rework, re-mark, and remove from service as necessary before further flight.

(2) For stage 1 HPT rotor disks that have been inspected before March 12, 2004 (effective date of superseded AD 2004-04-07) using GE ASB No. CF6-80C2 S/B 72-A1024, Revision 1, dated November 3, 2000, or any version of GE ASB No. CF6-80C2 S/B 72-A1026, inspect, rework, re-mark, and remove from service as necessary using the compliance times in the following Table 7:

**Table 7.—Compliance Times for Inspection and Rework of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/Ns 9392M23G10, G12, G21, 1531M84G02, G06, G08, and 1531M84G10 With SNs Not Listed in Table 6 and Table 6A of This AD—Previously Inspected**

<b>Stage 1 HPT Rotor Disk Cycles-Since-Last-Inspection (CSLI) on March 12, 2004 (effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time For Inspection and Rework</b>
(i) More than 1,500 CSLI.	At the next ESV after March 12, 2004 (effective date of superseded AD 2004-04-07), but not to exceed 4,500 CSLI.
(ii) 1,500 CSLI or fewer.	At the next ESV after March 12, 2004 (effective date of superseded AD 2004-04-07), but not to exceed 3,500 CSLI.

(3) For stage 1 HPT rotor disks that have not been inspected before March 12, 2004 (effective date of superseded AD 2004-04-07) using GE ASB No. CF6-80C2 S/B 72-A1024, Revision 1, dated November 3, 2000, or any version of GE ASB No. CF6-80C2 S/B 72-A1026, inspect, rework, re-mark, and remove from service as necessary using the following Table 8 or Table 8A compliance times, whichever occurs first:

**Table 8.—Compliance Times for Inspection and Rework of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/Ns 9392M23G10, G12, G21, 1531M84G02, G06, G08, and 1531M84G10 With SNs Not Listed in Table 6 and Table 6A of This AD—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk Cycles-Since-New (CSN) on the Effective Date of This AD</b>	<b>Compliance Time For Inspection and Rework</b>
(i) 9,000 or more CSN.	Within 250 CIS after the effective date of this AD, or by March 31, 2007, whichever occurs first.
(ii) 6,900 or more but fewer than 9,000 CSN.	Within 500 CIS after the effective date of this AD, but before accumulating 9,250 CSN, or by December 31, 2007, whichever occurs first.
(iii) Fewer than 6,900 CSN.	Before accumulating 7,400 CSN, or by December 31, 2008, whichever occurs first.

**Table 8A.—Compliance Times for Inspection and Rework of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/Ns 9392M23G10, G12, G21, 1531M84G02, G06, G08, and 1531M84G10 With SNs Not Listed in Table 6 and Table 6A of This AD—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk CSN on March 12, 2004 (effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time For Inspection and Rework</b>
(i) 10,000 or more CSN.	At the next ESV or within 1,000 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first.
(ii) 5,000 or more CSN but fewer than 10,000 CSN.	At the next ESV or within 2,400 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), but before accumulating 11,000 CSN.
(iii) Fewer than 5,000 CSN.	At the next ESV or within 3,500 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 7,400 CSN.

#### **Stage 1 HPT Rotor Disks, P/N 1862M23G01**

(m) For stage 1 HPT rotor disk, P/N 1862M23G01, remove the disk from service at the following times:

(1) For stage 1 HPT rotor disks not installed in engines, remove from service as necessary before further flight.

(2) For stage 1 HPT rotor disks that have been inspected before March 12, 2004 (effective date of superseded AD 2004-04-07), using any version of GE ASB No. CF6-80C2 S/B 72-A1026, and had more than zero CSN at the time of that inspection, remove from service at next ESV.

(3) For stage 1 HPT rotor disks that have not been inspected, or were only inspected with zero CSN before March 12, 2004 (effective date of superseded AD 2004-04-07), using any version of GE ASB No. CF6-80C2 S/B 72-A1026, remove from service using the following Table 9 or Table 9A compliance times, whichever occurs first:

**Table 9.—Compliance Times for Removal of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1862M23G01—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk CSN on the Effective Date of This AD</b>	<b>Compliance Time For Removal</b>
(i) 9,000 or more CSN.	Within 250 CIS after the effective date of this AD, or by March 31, 2007, whichever occurs first.
(ii) 6,900 or more but fewer than 9,000 CSN.	Within 500 CIS after the effective date of this AD, but before accumulating 9,250 CSN, or by December 31, 2007, whichever occurs first.
(iii) Fewer than 6,900 CSN.	Before accumulating 7,400 CSN, or by December 31, 2008, whichever occurs first.

**Table 9A.—Compliance Times for Removal of CF6-80C2 Series Stage 1 HPT Rotor Disks, P/N 1862M23G01—Not Previously Inspected**

<b>Stage 1 HPT Rotor Disk CSN on March 12, 2004 (effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time for Removal</b>
(i) 10,000 or more CSN.	At the next ESV or within 1,000 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first.
(ii) 5,000 or more CSN but fewer than 10,000 CSN.	At the next ESV or within 2,400 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 11,000 CSN.
(iii) Fewer than 5,000 CSN.	At the next ESV or within 3,500 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 7,400 CSN.

*CF6-80E1A2, A4 Engines*

**Stage 1 HPT Rotor Disks, P/N 1639M41P04**

(n) For stage 1 HPT rotor disks, P/N 1639M41P04, remove the rotor disks from service using paragraphs 3.A.(1) through 3.A.(2) of Accomplishment Instructions of GE SB No. CF6-80E1 S/B 72-0251, dated January 22, 2004, at the following times:

(1) For stage 1 HPT rotor disks currently in service, remove the disk using the compliance times in the following Table 10 or Table 10A compliance times, whichever occurs first:



**Table 10.—Compliance Times for Removal of CF6-80E1 Stage 1 HPT Rotor Disks,  
P/N 1639M41P04**

<b>Stage 1 HPT Rotor Disk CSN on the Effective Date of This AD</b>	<b>Compliance Time For Removal</b>
(i) 9,000 or more CSN.	Within 250 CIS after the effective date of this AD, or by March 31, 2007, whichever occurs first.
(ii) 6,900 or more but fewer than 9,000 CSN.	Within 500 CIS after the effective date of this AD, but before accumulating 9,250 CSN, or by December 31, 2007, whichever occurs first.
(iii) Fewer than 6,900 CSN.	Before accumulating 7,400 CSN, or by December 31, 2008, whichever occurs first.

**Table 10A.—Compliance Times for Removal of CF6-80E1 Stage 1 HPT Rotor Disks,  
P/N 1639M41P04**

<b>Stage 1 HPT Rotor Disk CSN on the March 12, 2004 ( effective date of superseded AD 2004-04-07)</b>	<b>Compliance Time for Removal</b>
(i) More than 10,000 CSN.	At the next ESV or within 600 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first.
(ii) More than 5,000 CSN but fewer than or equal to 10,000 CSN.	At the next ESV or within 2,500 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 10,600 CSN.
(iii) Fewer than or equal to 5,000 CSN.	At the next ESV or within 3,500 CIS after March 12, 2004 (effective date of superseded AD 2004-04-07), whichever occurs first, but before accumulating 7,500 CSN.

(2) After March 12, 2004 (effective date of superseded AD 2004-04-07), do not install any stage 1 HPT rotor disk, P/N 1639M41P04, into any engine.

## **Definitions**

(o) For the purpose of this AD, the following definitions apply:

(1) An engine shop visit (ESV) is when the engine is removed from an aircraft for maintenance and a major engine flange is disassembled. For stage 1 HPT rotor disks that have been inspected using any version of GE SB No. CF6-80A SB 72-0779 or any version of GE ASB No. CF6-80C2 ASB 72-A1026 or GE SB No. CF6-80C2 SB 72-A1024, Revision 1, dated November 3, 2000 or are listed in Table 6A or Table 6B, the following actions, either separately or in combination with each other, are not considered ESVs for the purpose of this AD:

- (i) The removal of the upper compressor stator case solely for airfoil maintenance.
- (ii) The module level inspection of the high-pressure compressor rotor 3-9 spool.
- (iii) The replacement of stage 5 high-pressure compressor variable stator vane bushings or lever arms.

(2) Piece-part exposure is when according to the manufacturer's engine manual or other FAA-approved engine manual the stage 1 HPT rotor disk is considered completely disassembled.

## **Reporting Requirements**

(p) Within five calendar days of the inspection, report the results of inspections that equal or exceed the reject criteria to: Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7176; fax (781) 238-7199. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056. Be sure to include the following information:

- (1) Engine model in which the stage 1 HPT rotor disk was installed.
- (2) Part Number.
- (3) Serial Number.
- (4) Part CSN.
- (5) Part CSLI.
- (6) Date and location where inspection was done.

(q) We request that you record the inspection information and results on GE Form 1653-1, entitled CF6-80A/80C Stage 1 HPT Disk Dovetail Slot Bottom Inspection. This form is available in any version of GE SB CF6-80A S/B 72-0779, or GE ASB CF6-80C2 S/B 72-A1026. We also request that a copy of the data be sent to GE Airline Support Engineering, General Electric Aircraft Engines, Customer Support Center, 1 Neumann Way, Mail Drop RM285, Cincinnati, OH 45215.

## **Alternative Methods of Compliance**

(r) The manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

## **Material Incorporated by Reference**

(s) You must use the service information specified in Table 11 to perform the actions required by this AD. The Director of the Federal Register previously approved the incorporation by reference of General Electric Service Bulletins No. CF6-80E1 S/B 72-0251, dated January 22, 2004 and No. CF6-80A S/B 72-0779, Revision 1, dated January 22, 2004, and Alert Service Bulletin No. CF6-80C2 S/B 72-A1026, Revision 2, dated January 22, 2004, as of March 12, 2004 (69 FR 8801, February 26, 2004). The Director of the Federal Register approved the incorporation by reference of the other documents listed in Table 11 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, fax (513) 672-8422. You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC. Table 11 follows:

**Table 11.—Incorporation by Reference**

<b>Service Bulletin No.</b>	<b>Page</b>	<b>Revision</b>	<b>Date</b>
GE SB No. CF6-80E1 S/B 72-0251 Total Pages: 4	ALL	Original	January 22, 2004
GE SB No. CF6-80A S/B 72-0779 Total Pages: 34	ALL	1	January 22, 2004
GE SB No. CF6-80A S/B 72-0788 Total Pages: 11	ALL	3	July 20, 2006
GE ASB No. CF6-80C2 S/B 72-A1026 Total Pages: 38	ALL	2	January 22, 2004
GE SB No. CF6-80C2 S/B 72-1089 Total Pages: 11	ALL	3	July 20, 2006
GE SB No. CF6-80C2 S/B 72-1217 Total Pages: 12	ALL	Original	July 20, 2006
GE SB No. CF6-80A S/B 72-0822 Total Pages: 10	ALL	Original	July 20, 2006

**Related Information**

(t) GE ASB No. CF6-80C2 S/B 72-A1024, Revision 1, dated November 3, 2000 also pertains to the subject of this AD.

Issued in Burlington, Massachusetts, on August 10, 2006.  
Francis A. Favara,  
Manager, Engine and Propeller Directorate, Aircraft Certification Service.  
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